

Title (en)
Magnetic disk drive having a function for using a thermal protrusion amount for flying height management and an inspection device having such a function

Title (de)
Plattenlaufwerk mit einer Funktion zur Verwendung der Höhe des thermisches Vorsprungs zur Führung der Flughöhe des Kopfs und einer Vorrichtung zur Überwachung, ausgerüstet mit solch einer Funktion.

Title (fr)
Disque magnétique avec une fonction, utilisant la protubérance thermique, pour gérer la distance de survol d'une tête magnétique et un appareil d'inspection qui utilise cette fonction.

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Application
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Abstract (en)
Recently, it is observed that a write head's material having a great thermal expansion coefficient expands due to Joule heat resulting from a write current and a temperature rise dependent on high-frequency core loss, thereby causing the head's flying surface to protrude toward a magnetic disk. This phenomenon is called TPR (thermal protrusion). It is essential that the flying height be accurately determined and managed in consideration of TPR. A magnetic disk drive for actual use or a magnetic disk drive that is in a testing process but similar to the one for actual use is used to measure TPR amount changes resulting from a write operation, store the resulting measured data in a memory or on the magnetic disk, and exercise flying height management with the stored measured data. Further, flying height management is exercised as needed in conjunction with a SMART function. The present invention makes it possible to exercise high-reliability flying height management. <IMAGE>

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